PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NDP 86780	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP 03/10988	International filing date *(day/month/year)* 01.10.2003	Priority date *(day/month/year)* 03.10.2002
International Patent Classification (IPC) or both national classification and IPC C23F1/44		
Applicant NUOVO PIGNONE HOLDING S.P.A.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
22.03.2004	10.09.2004
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Torfs, F Telephone No. +31 70 340-3037

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/10988

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-14 as originally filed

Claims, Numbers

1-6 received on 13.08.2004 with letter of 12.08.2004

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☒ the claims, Nos.: 7,8

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1-6
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-6
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: EP-A-1162286

1. The present application does not satisfy the criterion set forth in Article 33 (2) PCT because the subject-matter of claims 1-6 is not new in respect of prior art, as defined in the regulations (Rule 64 (1)-(3) PCT).

1.1 Document D1 discloses (see clauses 1,4,6,15,16,23,26,32 in columns 9 to 12) examples 2 and 4) a composition and process for removing overlay or diffusion coatings on a metal substrate, i.p. for removing coatings of MCrAlY-type with diffusion aluminide a turbine engine component. The component is immersed in a solution containing preferably 0.2-2.2 M fluorosilicic acid and 2-4 M phosphoric acid and stirred at 80°C during 4 hours (see examples) . The entire coating system (MCrAlY/aluminide) was removed, without any visible damage to the underlying substrate. It is stated clearly in example 4 that adding HCl (e.g. about 46 g/l) accelerates the process.
Claim 2 and any claim referring thereto are thus not novel with regard to D1.

1.2 Even if claim 1 should describe a solution which could be regarded as a selection invention, it would not be new because the claimed range is not narrow nor is any effect shown of possible features different from the state of the art (PCT Guidelines Chapter 12, Heading 10). Moreover, it appears that claim 1 can not be regarded as a selection invention because claim 1 and claim 2 do in fact define the same solution in a different way (see page 12, paragraph 3 of the application). Claim 1 and any claim referring thereto are thus not novel with regard to D1.

2. The invention shall be considered as susceptible of industrial application because it can be used in the metal finishing industry.

CLAIMS

1. An aqueous composition for the chemical removal of metallic surfacing present on blades of turbines comprising at least hexafluorosilicic acid and phosphoric acid whose final composition corresponds to that which can be obtained by mixing an aqueous solution of hexafluorosilicic acid at about 34% by weight in a quantity varying from 46% to 86% by volume with an aqueous solution of phosphoric acid at about 75% by weight in a quantity varying from 19% to 49% by volume, characterized in that said aqueous composition also comprises hydrochloric acid in aqueous solution at about 37% by weight added in a quantity substantially up to 15% of the volume of the bath obtained.

~~2. The aqueous composition according to claim 1, wherein said aqueous composition also comprises hydrochloric acid in aqueous solution at about 37% added in a quantity substantially varying from 0% to 15% of the volume of the bath obtained.~~

~~3.~~ 2. An aqueous composition for the chemical removal of metallic surfacing present on the blades of turbines comprising at least hexafluorosilicic acid and phosphoric acid in the following concentrations: hexafluorosilicic acid from 156.4 g/l to 292.4 and phosphoric acid from 142.5 g/l to 367.5 g/l, characterized in that said aque-

ous composition further comprises hydrochloric acid in aqueous solution added in a concentration substantially up to 48.3 g/l.

~~4. The aqueous composition according to claim 3, wherein said aqueous composition also comprises hydrochloric acid in a concentration substantially varying from 0 to 48.3 g/l.~~

~~5.~~ 3. Use of the aqueous composition according to any of the previous claims for the removal of metallic surfacing on gas turbine blades.

~~6.~~ 4. Use of the aqueous composition according to claim ~~2~~ 1 or ~~4~~ 2 for the removal of metallic surfacing comprising nickel and/or oxidized metallic surfacing on gas turbine blades.

~~7.~~ 5. Use of the aqueous composition according to claim ~~5~~ 3 or ~~6~~ 4, wherein said composition is used at a temperature ranging from 60°C to 90°C.

~~8.~~ 6. Use of the aqueous composition according to claim ~~5~~ 3 or ~~6~~ 4, wherein said composition is used for a time ranging from 4 hours to 15 hours.